

IN THE CLAIMS:

Please amend claims 1, 2, 4, 12, 14, 15, 16, 20, 21, 22, 23, 24, 25, 29, 30, 36, 40, 43, 44, 46, 47, 48, 49, 50, 51, 52, 53, 54, 59, 62, 63, 64, and 65 as follows:

Claim 1. (Currently amended) A wheel cleaning composition, comprising an effective amount of a dirt complexing polymer to complex with dirt particles is selected from the group consisting of a polyvinylpyrrolidone, a poly(4-vinylpyridine-betaine), a poly(N-vinylimidazole, a poly(4-vinylpyridine-N-oxide), and combinations thereof;

a scouring agent; and

a surfactant containing a mixture of an ionic surfactant, an anionic surfactant, and a quaternary ammonium compound.

Claim 2. (Currently amended) The wheel cleaning composition of claim 1, including an additional wherein said surfactant is a nonionic surfactant or cationic surfactant.

Claim 3. (Original) The wheel cleaning composition of claim 1, wherein said surfactant is selected from the group consisting of BEROL 226, PLUROFAC D25, and combinations thereof.

Claim 4. (Currently amended) The wheel cleaning composition of claim 1, including a quaternary ammonium compound nonionic surfactant containing from 8 to 12 carbons of which R is the linear primary alcohol and n is the total number of moles of ethylene oxide in accordance with the formula RO(CH₂CH₂O)_nH wherein R is selected from the group consisting of a linear C₈ C₉ C₁₀ C₁₁ C₁₂ Poly(2) or (4) or (6) or (8) oxyethylene C₈₋₁₂ alcohol; linear C₉ C₁₀ C₁₁ Poly(2.5) or (6) or (8) oxyethylene C₉₋₁₁ alcohol; linear C₁₁ Poly(3) or (5) or (7) oxyethylene C₁₁ alcohol; linear C₁₂/C₁₃ Poly(1) or (3) or (5) or (6.5) oxyethylene C₁₂₋₁₃ alcohol; linear C₁₂ C₁₃ C₁₄ C₁₅ Poly(3) or (7) or (9) or (12) oxyethylene C₁₂₋₁₅ alcohol; and linear C₁₄/C₁₅ Poly(2.5) or (7) or (13) oxyethylene C₁₄₋₁₅ alcohol.

Claim 5. (Original) The wheel cleaning composition of claim 1, including a compound selected from the group consisting of an amine oxide, a nonyl phenol ethoxylate, an ethoxylated alcohol, and ethoxylate propoxylated block co-polymer, and a diethanolamide.

Claim 6. (Original) The wheel cleaning composition of claim 1, including a conventional wheel cleaning agent comprising an acid-based formulation.

Claim 7. (Original) The wheel cleaning composition of claim 6, including wherein said acid-based formulation includes an acid cleaner selected from the group consisting of a phosphoric, a hydrochloric, a sulfuric, an oxalic, an acetic, a nitric, a hydroxyacetic, a hydrofluoric, a citric acid, and combinations thereof.

Claim 8. (Original) The wheel cleaning composition of claim 1, including a conventional wheel cleaning agent comprising an alkaline-based formulation.

Claim 9. (Original) The wheel cleaning composition of claim 8, including an effective amount of an alkaline cleaner capable of dissolving and emulsifying organic soils selected from the group consisting of a detergent, a water soluble organic solvent, a glycol ether, a sodium hydroxide solution, a potassium hydroxide solution, an alkaline silicate, an alkaline phosphate, and combinations thereof.

Claim 10. (Original) The wheel cleaning composition of claim 9, wherein said detergent is an anionic synthetic detergent.

Claim 11. (Original) The wheel cleaning composition of claim 10, wherein said anionic synthetic detergent is an alkyl sulfate.

Claim 12. (Currently amended) The wheel cleaning composition of claim [11] 10, wherein said ~~alkyl sulfate detergent~~ is selected from the group consisting of a sodium lauryl sulfate, an alkyl

ether sulfate, a linear alkyl benzene sulfonate, and combinations thereof.

Claim 13. (Original) The wheel cleaning composition of claim 9, wherein the amount of said alkaline cleaner is not critical so long as it remains soluble in an aqueous solution and is capable of dissolving and emulsifying organic soils.

Claim 14. (Currently amended) The wheel cleaning composition of claim 9, wherein said alkaline cleaner is present in an amount of up to 40 percent by weight.

Claim 15. (Currently amended) The wheel cleaning composition of claim 1, including an organic solvent in an amount of up to 50% by weight.

Claim 16. (Original) The wheel cleaning composition of claim 15, wherein said organic solvents are selected from the group consisting of an ethylene glycol, a propylene glycol, a glycol ether, a hydrocarbon, an alcohol, a n-methyl pyrrolidone, a ketone, a lactone, a terpene, and combinations thereof.

Claim 17. (Original) The wheel cleaning composition of claim 16, wherein said terpene is a limonene.

Claim 18. (Original) The wheel cleaning composition of claim 1, including a chelating agent for aiding in the removable of insoluble deposits of calcium and magnesium soaps and salts thereof.

Claim 19. (Original) The wheel cleaning composition of claim 18 wherein said chelating agent is ethylenediaminetetraacetic acid (“EDTA”) and salts thereof.

Claim 20. (Currently amended) The wheel cleaning composition of claim 19, wherein said salts of EDTA are selected from the group consisting of calcium disodium ~~edentate~~ edetate,

disodium edentate edetate, tetrasodium edentate edetate, trisodium sodium ferric edentate edetate, dihydrogen ferrous edentate edetate.

Claim 21. (Currently amended) The wheel cleaning composition of claim 18 wherein said chelating agent comprises a disodium salt[s] of magnesium, cobalt, manganese, copper, zinc, and nickel.

Claim 22. (Currently amended) The wheel cleaning composition of claim 2 wherein said cationic surfactant, said nonionic surfactant, or [said] a combination thereof is present in an amount of up to 20 percent by weight.

Claim 23. (Currently amended) The wheel cleaning composition of claim 2 wherein said cationic surfactant, said nonionic surfactant, or [said] a combination thereof is present in an amount of up to 0.01 to 5.0 percent by weight.

Claim 24. (Amended) The wheel cleaning composition of claim 1 including at least two [a] scouring agents.

Claim 25. (Currently amended) The wheel cleaning composition of claim [1] 24, wherein said scouring agent is selected from the group consisting of sodium metasilicate pentahydrate, sodium metasilicate anhydrous, and silicates.

Claim 26. (Original) The wheel cleaning composition of claim 25 wherein said scouring agent is present in an amount of up to 10 percent by weight.

Claim 27. (Original) The wheel cleaning composition of claim 25 wherein said scouring agent is present in an amount of from between 0.01 and 5.0 percent by weight.

Claim 28. (Original) The wheel cleaning composition of claim 1 including a dispersing and

emulsifying agent.

Claim 29. (Currently amended) The wheel cleaning composition of claim [1] 28 wherein said dispersing and emulsifying agent is selected from the group consisting of trisodium phosphate, tetrapotassium pyrophosphate, sodium tripolyphosphate, sodium citrate, monosodium phosphate, disodium phosphate, sodium acid pyrophosphate, and combinations thereof.

Claim 30. (Currently amended) The wheel cleaning composition of claim 29 wherein said dispersing and emulsifying agent is present in an amount of up to 10.0 percent by weight.

Claim 31. (Original) The wheel cleaning composition of claim 29 wherein said dispersing and emulsifying agent is present in an amount of between .01 to 5.0 percent by weight.

Claim 32. (Original) The wheel cleaning composition of claim 1 including a effective amount of a compound to effect a bitter taste to the composition.

Claim 33. (Original) The wheel cleaning composition of claim 32 wherein said compound to effect a bitter taste to the composition is BITREX.

Claim 34. (Original) The wheel cleaning composition of claim 1 including a viscosity thickener.

Claim 35. (Original) The wheel cleaning composition of claim 34 wherein said viscosity thickener is present in an amount of up to 5.0 percent by weight.

Claim 36. (Currently amended) The wheel cleaning composition of claim [1] 34, wherein said viscosity thickener is ELFACOS CD481 (1%).

Claim 37. (Original) The wheel cleaning composition of claim 1, wherein said

polyvinylpyrrolidone comprises a molecular weight in the range of from between 6,000- 15,000.

Claim 38. (Original) The wheel cleaning composition of claim 1, wherein said polyvinylpyrrolidone comprises a molecular weight in the range of from between 40,000 - 80,000.

Claim 39. (Original) The wheel cleaning composition of claim 1, wherein said polyvinylpyrrolidone comprises a molecular weight in the range of from between 240,000- 400,000.

Claim 40. (Currently amended) The wheel cleaning composition of claim 1, wherein said polyvinylpyrrolidone comprises a molecular weight in the range of from between ~~240,000- 400,000~~ 6,000- 15,000.

Claim 41. (Original) The wheel cleaning composition of claim 1, wherein said polyvinylpyrrolidone comprises a molecular weight in the range of from between 900,000 - 1,500,000.

Claim 42. (Original) The wheel cleaning composition of claim 1, wherein said polyvinylpyrrolidone comprises a molecular weight in the range of from between 2,000,000 - 3,000,000.

Claim 43. (Currently amended) The wheel cleaning composition of claim 1, wherein [said] an alkylated polyvinylpyrrolidone is selected from the group consisting of GANEX P-904L which is an alkylated PVP copolymer comprising 90% vinyl pyrrolidone and 10% of a C₄ [%-] olefins (1-butene), GANEX V-516 which is an alkylated PVP copolymer comprising of 50% vinyl pyrrolidone and 50% of a[n] C₁₆ [%-] olefins (1-hexadecene), GANEX V-216 which is an alkylated PVP copolymer comprising 20% vinyl pyrrolidone and 80% of a C₄ [%-] olefins (1-butene), GANEX V-220 which is an alkylated PVP copolymer comprising 20% vinyl pyrrolidone and 80% of a[n] C₂₀ [%-]olefins (1-eicosene), GANEX V-660 which is an alkylated PVP copolymer comprising 20% of a vinyl pyrrolidone and 80% of a[n] C₃₀ [%-] olefins (1-tricosene), and combinations thereof.

Claim 44. (Currently amended) The wheel cleaning composition of claim 1, wherein said poly(4-vinylpyridine vinylpyridine-N-oxide) is in a 40% aqueous solution, (product containing 40% active ingredient in a water solution).

Claim 45. (Original) The wheel cleaning composition of claim 1, wherein said poly(4-vinylpyridine-betaine) has a molecular weight range of from between 15,000 and 200,000 (GPC).

Claim 46. (Currently amended) The wheel cleaning composition of claim 1, including a cleaning additive selected from the group comprising tauroamphoglycerinates lauroamphoglycerinates and betaines.

Claim 47. (Currently amended) The wheel cleaning composition of claim [1] 24, wherein said scouring agent is present in an amount of up to 10.0 percent by weight.

Claim 48. (Currently amended) The wheel cleaning composition of claim [1] 24, wherein said scouring agent is present in an amount of up to 0.1 to 5.0 percent by weight.

Claim 49. (Currently amended) The wheel cleaning composition of claim 1, wherein said composition is prepared in a concentrate of from 0.01 to 10.0% (w/w) and diluted with water to less than 1% (w/w) for application to the surface of the wheel or tire.

Claim 50. (Currently amended) The wheel cleaning composition of claim 49, wherein said composition is prepared in a concentrate of from 0.01 to 10.0% (w/w) and diluted to a 1:3 ratio with water.

Claim 51. (Currently amended) The wheel cleaning composition of claim 1, wherein said composition is prepared in a concentrate of from 0.01 to 2.0% (w/w) and diluted with water to less than 1% (w/w) for application to the surface of the wheel or tire.

Claim 52. (Currently amended) The wheel cleaning composition of claim 1, wherein said composition is prepared in a concentrate of from 0.01 to 2.0% (w/w) and diluted with water to between 0.1 to 0.5% (w/w) for application to the surface of the wheel or tire.

Claim 53. (Currently amended) A wheel cleaning composition, comprising an effective amount of a dirt complexing polymer to complex with dirt particles is selected from the group consisting of a polyvinylpyrrolidone, a poly(4-vinylpyridine-betaine), a poly(N-vinylimidazole, a poly(4-vinylpyridine-N-oxide), and combinations thereof;

a surfactant;

a scouring agent;

a solvent;

a detergent; and

water.

Claim 54. (Currently amended) The wheel cleaning composition of claim 53, wherein said ~~surfactant is VERSENE 100~~ scouring agent is ethylenediaminetetraacetic acid in an amount of from between 0.01 to 20.0 percent by weight.

Claim 55. (Original) The wheel cleaning composition of claim 53, wherein said scouring agent is sodium metasilicate pentahydrate in an amount of from between 0.01 and 10 percent by weight.

Claim 56. (Original) The wheel cleaning composition of claim 53, wherein said solvent is an alcohol in an amount of up to 50 percent by weight.

Claim 57. (Original) The wheel cleaning composition of claim 53, including a chelating agent for aiding in the removable of insoluble deposits of calcium and magnesium soaps and salts thereof.

Claim 58. (Original) The wheel cleaning composition of claim 57 wherein said chelating agent is ethylenediaminetetraacetic acid (“EDTA”) and salts thereof.

Claim 59. (Currently amended) A method of preparing a wheel cleaning composition comprising the steps of:

preparing a solution of water ~~or water and a polar solvent~~ in a container;

agitating said solution;

selecting an effective amount of a dirt complexing polymer selected from the group consisting of a polyvinylpyrrolidone, a poly(4-vinylpyridine-betaine), a poly(N-vinylimidazole, a poly(4-vinylpyridine-N-oxide), and combinations thereof and adding same to said solution dispersing same;

adding a scouring agent comprising a sodium metasilicate pehtahydrate and an ethylenediaminetetraacetic acid to said solution dispersing same;

adding a ionic and anion surfactant to said solution dispersing same; [and]

agitating said solution obtaining a homogenous wheel cleaning composition mixture;

applying said composition to a wheel of a vehicle;

waiting for at least 30 seconds; and

rinsing said wheel with water.

Claim 60. (Original) The wheel cleaning composition of claim 59, including the step of adding a chelating agent and dispersing same for aiding in the removable of insoluble deposits of calcium and magnesium soaps and salts thereof.

Claim 61. (Original) The wheel cleaning composition of claim 60 wherein said chelating agent is ethylenediaminetetraacetic acid (“EDTA”) and salts thereof.

Claim 62. [A] The method of preparing a wheel cleaning composition, of claim 59, further comprising the steps of selecting an effective amount of a dirt complexing polymer selected from the group consisting of a polyvinylpyrrolidone, a poly(4-vinylpyridine-betaine), a poly(N-

vinylimidazole, a poly(4-vinylpyridine-N-oxide), and combinations thereof and mixing said dirt complexing polymer together with an acid-based formulation in an aqueous solution.

Claim 63. A method of cleaning a wheel comprising the steps of:

applying a wheel cleaning composition comprising an effective amount of a dirt complexing polymer selected from the group consisting of a polyvinylpyrrolidone, a poly(4-vinylpyridine-betaine), a poly(N-vinylimidazole, a poly(4-vinylpyridine-N-oxide), mixed together with a scouring agent, a surfactant, and a chelating agent, and combinations mixed together in an aqueous solution by spraying said wheel cleaning composition onto a wheel or tire;

preparing a solution of water in a container;

agitating said solution;

selecting an effective amount of a dirt complexing polymer selected from the group consisting of a polyvinylpyrrolidone, a poly(4-vinylpyridine-betaine), a poly(N-vinylimidazole, a poly(4-vinylpyridine-N-oxide), and combinations thereof and adding same to said solution dispersing same;

adding a scouring agent comprising a sodium metasilicate pehtahydrate and an ethylenediaminetetraacetic acid to said solution dispersing same;

adding a ionic and anion surfactant to said solution dispersing same;

agitating said solution obtaining a homogenous wheel cleaning composition mixture;

applying said composition to a wheel of a vehicle;

wiping with a cloth or sponge; and

rinsing said wheel or tire with water.

Claim 64. (Once amended) A method of cleaning a wheel comprising the steps of:

applying a wheel cleaning composition comprising an effective amount of a dirt complexing polymer selected from the group consisting of a polyvinylpyrrolidone, a poly(4-vinylpyridine-betaine), a poly(N-vinylimidazole, a poly(4-vinylpyridine-N-oxide), and combinations mixed thereof together with a conventional wheel cleaning agent comprising an alkaline-based formulation in an aqueous solution by spraying said wheel cleaning composition onto a wheel or tire;

applying said composition to a wheel of a vehicle;
waiting for 30 seconds; and
rinsing said wheel with water.

Claim 65. (Currently amended) The method of cleaning a wheel comprising the steps set forth in claims 64 and 64 wherein said wheel comprises aluminum, chrome, stainless steel, painted steel, painted aluminum, clear coated aluminum, plastic, fiberglass, and rubber.

Please add new claims 66- 101 as follows:

Claim 66. (New) A wheel cleaning composition, comprising:
a polymer selected from the group consisting of a polyvinylpyrrolidone, a poly(4-Vinylpyridine-betaine), a poly(N-vinylimidazole, a poly(4-vinylpyridine-N-oxide), and combinations thereof;

a surfactant;
at least one scouring agent; and
water.

Claim 67. (New) The wheel cleaning composition of claim 66, wherein said scouring agent is ethylenediaminetetraacetic acid in an amount of from between 0.01 to 20.0 percent by weight.

Claim 68. (new) The wheel cleaning composition of claim 66, wherein said scouring agent is sodium metasilicate pentahydrate in an amount of from between 0.01 and 10 percent by weight.

Claim 69. (New) The wheel cleaning composition of claim 66, wherein said scouring agent is ethylenediaminetetraacetic acid and sodium metasilicate pentahydrate in an amount of from between 0.01 to 20.0 percent by weight.

Claim 70. (New). The wheel cleaning composition of claim 66 further comprising an

organic solvent in an amount of up to 50 percent by weight.

Claim 71. (New) The wheel cleaning composition of claim 69, wherein said ethylenediaminetetraacetic acid functions at least in part as a chelating agent removing insoluble deposits of calcium and magnesium soaps and salts thereof.

Claim 72. (New) The wheel cleaning composition of claim 66 wherein said at least one scouring agent is an edetate.

Claim 73. (New) The wheel cleaning composition of claim 72 wherein said at least one edetate comprises an ethylenediaminetetraacetic acid (“EDTA”) and salt thereof.

Claim 74. (New) The wheel cleaning composition of claim 73 wherein said at least one edetate is selected from the group consisting of a salt of magnesium, cobalt manganese, copper, zinc, and nickel.

Claim 75. (New) The wheel cleaning composition of claim 73 wherein said at least one edetate is selected from the group consisting of calcium disodium, disodium edetates, tetrasodium, trisodium sodium ferric, and dihydrogen ferrous.

Claim 76. (New) The wheel cleaning composition of claim 66 wherein said polymer comprises a poly(4-vinylpyridine-N-oxide, (“PVNO”).

Claim 77 (new) The wheel cleaning composition of claim 66 wherein said polymer is (4-ethenylpyrine, homopolymer, N-oxide) in an aqueous solution.

Claim 78 (new) The wheel cleaning composition of claim 66 wherein said poly(4-Vinylpyridine-N-oxide is in an aqueous solution.

Claim 79 (new) The wheel cleaning composition of claim 66 wherein said poly(4-Vinylpyridine-N-oxide is in a 40% aqueous solution.

Claim 80 (new) The wheel cleaning composition of claim 66 wherein said surfactant is a cationic surfactant.

Claim 81 (new) The wheel cleaning composition of claim 66 wherein said surfactant is present in an amount ranging up to 10 percent by weight.

Claim 82 (new) The wheel cleaning composition of claim 66 wherein said surfactant is present in an amount ranging from .01 to 5.0 percent by weight.

Claim 83 (new) The wheel cleaning composition of claim 66 wherein said surfactant is present in an amount ranging from .01 to 3.0 percent by weight.

Claim 84 (new) The wheel cleaning composition of claim 70 wherein said organic solvent comprises an ethylene glycol, a propylene glycol, a glycol ether, a hydrocarbon, an alcohol, a n-methyl pyrrolidone, a ketone, a lactone, a terpene, and combinations thereof.

Claim 85 (new) The wheel cleaning composition of claim 70 wherein said organic solvent is an alcohol.

Claim 86. (new) The wheel cleaning composition of claim 66 wherein said polymer is present in an amount up to 10.0% by weight of the total solution.

Claim 87. (new) The wheel cleaning composition of claim 66 wherein said polymer is present in an amount ranging from 0.01 to 2.0 percent by weight of the total solution.

Claim 88. (new) The wheel cleaning composition of claim 66 wherein said polymer is

present in an amount ranging from 0.1 to 0.6 percent by weight.

Claim 89. (new) The wheel cleaning composition of claim 66 wherein said polymer is present in a concentrate in an amount ranging from 0.1 to 0.6 percent by weight and said concentrate is diluted to a 1:3 ratio with water to an amount of about 0.2% (w/w) for application to the wheel or other surface to be cleaned therewith.

Claim 90. (New) The wheel cleaning composition of claim 66, wherein said polymer comprises a polyvinylpyrrolidone comprises a molecular weight in the range of from between 6,000-15,000.

Claim 91. (New) The wheel cleaning composition of claim 66, wherein said polymer comprises a polyvinylpyrrolidone having a molecular weight in the range of from between 40,000 - 80,000.

Claim 92. (New) The wheel cleaning composition of claim 66, wherein said polymer comprises a polyvinylpyrrolidone having a molecular weight in the range of from between 240,000-400,000.

Claim 93. (New) The wheel cleaning composition of claim 66, wherein said polymer comprises a polyvinylpyrrolidone having a molecular weight in the range of from between 6,000-15,000.

Claim 94. (New) The wheel cleaning composition of claim 66, wherein said polymer comprises a polyvinylpyrrolidone having a molecular weight in the range of from between 900,000 - 1,500,000.

Claim 95. The wheel cleaning composition of claim 66, wherein said polymer comprises a polyvinylpyrrolidone comprises a molecular weight in the range of from between 2,000,000 -

3,000,000.

Claim 96 (new) The wheel cleaning composition of claim 66 wherein said surfactant is a ionic surfactant.

Claim 97 (new) The wheel cleaning composition of claim 66 wherein said surfactant comprises a mixture of a cationic and ionic surfactant.

Claim 98 (new) The wheel cleaning composition of claim 66 wherein said surfactant includes at least one of the group consisting of a nonionic surfactant containing from 8 to 12 carbons of which R is the linear primary alcohol and n is the total number of moles of ethylene oxide in accordance with the formula $RO(CH_2CH_2O)_nH$ wherein R is selected from the group consisting of a linear C₈ C₉ C₁₀ C₁₁ C₁₂ Poly(2) or (4) or (6) or (8) oxyethylene C₈₋₁₂ alcohol; linear C₉ C₁₀ C₁₁ Poly(2.5) or (6) or (8) oxyethylene C₉₋₁₁ alcohol; linear C₁₁ Poly(3) or (5) or (7) oxyethylene C₁₁ alcohol; linear C₁₂/C₁₃ Poly(1) or (3) or (5) or (6.5) oxyethylene C₁₂₋₁₃ alcohol; linear C₁₂ C₁₃ C₁₄ C₁₅ Poly(3) or (7) or (9) or (12) oxyethylene C₁₂₋₁₅ alcohol; and linear C₁₄/C₁₅ Poly(2.5) or (7) or (13) oxyethylene C₁₄₋₁₅ alcohol.

Claim 99 (new) The wheel cleaning composition of claim 66 further comprising at least one quaternary ammonium compound.

Claim 100. (New) A method of cleaning a wheel of a vehicle comprising the following steps: providing a wheel cleaning composition of claim 66; applying said composition to a wheel of a vehicle; waiting for at least 30 seconds; and rinsing said wheel with water.

Claim 101. (New) A method of cleaning a wheel of a vehicle comprising the following steps: providing a wheel cleaning composition of claim 66;

spraying said composition to a wheel of a vehicle;
wiping said wheel with a cloth or sponge; and
rinsing said wheel or tire with water.